IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently Amended): Dihydropyridine derivatives of the following general

A dihydropyridine of formula (1) and or a pharmaceutically acceptable salts salt thereof:

$$\begin{array}{c|c}
A & O \\
X & O \\
X & O \\
Y & F \\
C & N & E
\end{array}$$
(1)

wherein A represents a group of the following general formula (2), or l-naphthyl, 2-naphthyl, thiophene-3-yl, thiophene-2-yl, furan-3-yl, furan-2-yl, pyridine-4-yl, pyridine-3-yl, pyridine-2-yl, indole-2-yl or indole-3-yl group:

$$R^2$$
 R^4
 R^5
 R^5

wherein R¹, R², R³, R⁴ and R⁵ may be the same or different from each other and each represent hydrogen atom, a halogen atom, hydroxyl group, carboxyl group, amino group, cyano group, nitro group, a lower alkyl group, a lower alkoxyl group, a lower alkenyl group, a lower alkynyl group, a lower alkylamino group, a lower alkylthio group, a lower alkanoyl

group, a lower alkoxycarbonyl group, a hydroxy-lower alkyl group, a hydroxy-lower alkoxyl group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkoxyl group, a halogeno-lower alkenyl group, an aryl-lower alkoxyl group or an aroyl group,

B represents cyano group, nitro group, carboxyl group, acetyl group or a group of the following general formula (3):

$$\frac{0}{1-N} < \frac{R^6}{R^7}$$

wherein R⁶ and R⁷ may be the same or different from each other and each represent hydrogen atom, a lower alkyl group, an amino-lower alkyl group, an amino-lower alkyl group, an amino-lower alkyl group, a hydroxy-lower alkyl group, a lower cycloalkyl group, an amino-lower alkenyl group, a carboxy-lower alkenyl group, a hydroxy-lower alkenyl group, an aryl group, a heteroaryl group, an aryl-lower alkyl group, a heteroaryl-lower alkyl group, a lower alkyl group substituted with a cyclic alkyl group which may have a hetero atom in the ring, an aryl-lower alkenyl group or an aryl-lower alkyloxycarbonyl-lower alkyl group, or R⁶ and R⁷ may together form a ring which may contain a hetero atom and when the hetero atom is nitrogen atom, it may have a substituent,

C and E may be the same or different from each other and each represent hydrogen atom, a lower alkyl group, dimethoxymethyl group, cyano group, a hydroxy-lower alkyl group, a carboxy-lower alkyl group, a halogeno-lower alkyl group, an amino-lower alkyl group, in which the amino group may be substituted with one or two of a lower alkyl group, a

lower cycloalkyl group, an aryl group or an aryl-lower alkyl group, an azido-lower alkyl group, an aryl group, a heteroaryl group, an aryl-lower alkyl group, a heteroaryl-lower alkyl group, a lower alkyl group substituted with a cyclic alkyl group which may contain a hetero atom in the ring, or a carbamoyl-lower alkyl group, in which the carbamoyl group may be substituted with one or two of a lower alkyl group, a lower cycloalkyl group, an aryl group or an aryl-lower alkyl group,

D represents a hydrogen atom, a lower alkyl group, a hydroxy-lower alkyl group or an aryl-lower alkyl group,

F represents a group represented by any of the following general formulae formulae (4) to (8):

wherein G and H may be the same or different from each other and each represent phenyl group, benzyl group, 1-naphthyl group, 2-naphthyl group, thiophene-3-yl group, thiophene-3-yl group, furan-2-yl group, furan-2-yl group, pyridine-4-yl group, pyridine-3-yl group, pyridine-2-yl group, pyridine-4-ylmethyl group, pyridine-3-ylmethyl group or pyridine-2-ylmethyl group, I represents hydrogen atom or hydroxyl group, J-represents

-CH₂-, -NH-, oxygen atom or sulfur atom, and one or two atoms surrounding condensed rings (5) to (8) may be nitrogen atoms,

X represents an interatomic bond, -CH₂-, -CH₂CH₂-, -CH=CH- or -C≡C-, and
Y represents an alkyl group having 1 to 7 carbon atoms, which may contain a hetero
atom or cyclopropane ring in the chain, or an alkenyl group, which may contain a hetero atom
or cyclopropane ring in the chain.

Claim 2 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 1, wherein in general formula (1), B represents carboxyl group, cyano group or a group represented by general formula (3), D represents hydrogen atom, F represents a group of general formula (4) in which G and H each represent phenyl group, and Y represents an alkyl group having 2 or 3 carbon atoms.

Claim 3 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 2, wherein A represents a group of general formula (2) and X represents an interatomic bond.

Claim 4 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 3, wherein B represents carboxyl group or a group of general formula (3).

Claim 5 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 3, wherein C and E may be the same or different from each other and each represent a lower alkyl group, a lower alkyl

group substituted with a cyclic alkyl group, which may contain a hetero atom in the ring, a hydroxy-lower alkyl group, an aryl-lower alkyl group or a heteroaryl-lower alkyl group.

Claim 6 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 5, wherein A represents a group of general formula (2) wherein R¹, R³, R⁴ and R⁵ each represent hydrogen atom and R² represents chlorine atom, bromine atom, iodine atom, nitro group or cyano group, C and E may be the same or different from each other, and they each represent methyl group, ethyl group, a lower alkyl group substituted with a cycloalkyl group which may contain a hetero atom in the ring, a hydroxy-lower alkyl group, an aryl-lower alkyl group or a heteroaryl-lower alkyl group, and F represents a group of general formula (4) in which I represents hydrogen atom.

Claim 7 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 6, wherein B represents carboxyl group.

Claim 8 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 6, wherein A represents a group of general formula (2) wherein R¹, R³, R⁴ and R⁵ each represent hydrogen atom and R² represents chlorine atom, bromine atom, iodine atom or nitro group, C represents methyl group, ethyl group or 2-piperidinoethoxymethyl group, and E represents methyl group, ethyl group, dimethoxymethyl group, 2-piperidinoethoxymethyl group, 2-hexamethyleneiminoethoxymethyl group, methoxymethyl group, 2-benzyloxyethoxymethyl group, 2-(2-pyridyl)ethoxymethyl group or 2-hydroxyethoxymethyl group.

Claim 9 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 8, wherein B represents carboxyl group.

Claim 10 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 3, wherein C represents hydrogen atom, a lower alkyl group, dimethoxymethyl group, cyano group, a hydroxy-lower alkyl group, a halogeno-lower alkyl group, an amino-lower alkyl group (in which the amino group may be substituted with one or two of a lower alkyl group, a lower cycloalkyl group, an aryl group and an aryl-lower alkyl group), an azido-lower alkyl group, an aryl group, a heteroaryl group, an aryl-lower alkyl group, a heteroaryl-lower alkyl group, a lower alkyl group substituted with a cyclic alkyl group (which may contain a hetero atom in the ring) or a carbamoyl-lower alkyl group, a lower cycloalkyl group, an aryl group and an aryl-lower alkyl group, and E represents methyl group, ethyl group, a lower alkoxymethyl group, a hydroxylower alkoxymethyl group, an aryl-lower alkoxymethyl group, a heteroaryl-lower alkoxymethyl group, or a lower alkoxymethyl group, a heteroaryl-lower alkoxymethyl group, or a lower alkoxymethyl group substituted with a cycloalkyl group (which may contain a hetero atom in the ring).

Claim 11 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 10 wherein B represents carboxyl group.

Claim 12 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 1 wherein A represents a group of general formula (2), B represents carboxyl group, cyano group or a group of general formula (3), D represents hydrogen atom, C and E may be the same or different from each other, and they each represent a lower alkyl group, a lower alkyl group substituted with a cycloalkyl group, which may contain a hetero atom in the ring, an aryl-lower alkyl group, a heteroaryl-lower alkyl group or a hydroxy-lower alkyl group, and X represents an interatomic bond.

Claim 13 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 12, wherein B represents carboxyl group.

Claim 14 (Currently Amended): The A dihydropyridine derivatives and or pharmaceutically acceptable salts salt thereof according to claim 13 wherein A represents a group of general formula (2) wherein R¹, R³, R⁴ and R⁵ each represent hydrogen atom and R² represents chlorine atom, bromine atom, iodine atom or nitro group, C represents methyl group, ethyl group or 2-piperidinoethoxymethyl group, and E represents a lower alkyl group, a lower alkyl group substituted with a cycloalkyl group which may contain a hetero atom in the ring, an aryl-lower alkyl group, a heteroaryl-lower alkyl group or a hydroxy-lower alkyl group.

Claim 15 (Currently Amended): The \underline{A} dihydropyridine derivatives and \underline{or} pharmaceutically acceptable salts salt thereof according to claim 13 wherein A represents a group of general formula (2) wherein R^1 , R^3 , R^4 and R^5 each represent hydrogen atom and R^2

represents chlorine atom, bromine atom, iodine atom or nitro group, C represents methyl group, ethyl group or 2-piperidinoethoxymethyl group, and E represents methyl group, ethyl group, dimethoxymethyl group, 2-piperidinoethoxymethyl group, 2-hexamethyleneiminoethoxymethyl group, methoxymethyl group, 2-benzyloxyethoxymethyl group, 2-(2-pyridyl)ethoxymethyl group or 2-hydroxyethoxymethyl group.

Claim 16 (Currently Amended): An N-type calcium channel antagonist comprising an effective amount of a dihydropyridine derivative or a pharmaceutically acceptable salt thereof according to claim 1 as an active ingredient and an inert carrier.

Claim 17 (Currently Amended): A therapeutic agent comprising the an effective amount of a dihydropyridine derivative or a pharmaceutically acceptable salt thereof according to claim 1 as an active ingredient and an inert carrier, for any of acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease, progressive neurodegenerative diseases, neuropathy caused by head injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis and withdrawal symptoms after addiction to drugs.

Claim 18 (Currently Amended): A therapeutic agent comprising the an effective amount of a dihydropyridine derivative or a pharmaceutically acceptable salt thereof according to claim 3 as an active ingredient and an inert carrier, for any of acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease, progressive neurodegenerative diseases, neuropathy caused by head injury, pain caused by

thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis and withdrawal symptoms after addiction to drugs.

Claim 19 (Currently Amended): A therapeutic agent comprising the an effective amount of a dihydropyridine derivative or a pharmaceutically acceptable salt thereof according to claim 12 as an active ingredient and an inert carrier, for any of acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease, progressive neurodegenerative diseases, neuropathy caused by head injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis and withdrawal symptoms after addiction to drugs.

Claim 20 (Currently Amended): A pharmaceutical composition comprising any of a dihydropyridine compounds and or pharmaceutically acceptable salts salt thereof according to claim 1 as an active ingredient and an inert carrier.

Claim 21 (Currently Amended) A method of treating acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease, progressive neurodegenerative diseases, neuropathy caused by head injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis, or withdrawal symptoms after addiction to drugs, comprising administering an effective amount of the a dihydropyridine compound or a pharmaceutically acceptable salt thereof according to claim 1 to a subject in need thereof.

Claim 22 (New): A method of treating acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease, progressive neurodegenerative diseases, neuropathy caused by head injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis, or withdrawal symptoms after addiction to drugs, comprising administering an effective amount of a dihydropyridine or a pharmaceutically acceptable salt thereof according to claim 3 to a subject in need thereof.

Claim 23 (New): A method of treating acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease, progressive neurodegenerative diseases, neuropathy caused by head injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis, or withdrawal symptoms after addiction to drugs, comprising administering an effective amount of a dihydropyridine or a pharmaceutically acceptable salt thereof according to claim 12 to a subject in need thereof.

Claim 24 (New): A pharmaceutical composition comprising a dihydropyridine or pharmaceutically acceptable salt thereof according to claim 3 and an inert carrier.

Claim 25 (New): A pharmaceutical composition comprising a dihydropyridine or pharmaceutically acceptable salt thereof according to claim 12 and an inert carrier.

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Claim 26 (New): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 1, wherein heteroaryl group means substituted or unsubstituted pyridyl group or substituted or unsubstituted furyl group.

Claim 27 (New): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 1, wherein heteroaryl lower alkyl group means pyridylmethyl group, 2-(2-pyridyl)ethoxymethyl group, 2-(3-pyridyl)ethoxymethyl group, or 2-(4-pyridyl)ethoxymethyl group.